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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/782,461	02/19/2004	Nick M. Miller IV	KENT 35835US1	4852
116	7590	06/16/2006	EXAMINER	
PEARNE & GORDON LLP			PATEL, NITIN	
1801 EAST 9TH STREET				
SUITE 1200			ART UNIT	PAPER NUMBER
CLEVELAND, OH 44114-3108				2629

DATE MAILED: 06/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/782,461	MILLER ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Nitin Patel	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 30 March 2006.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-42 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) 31-42 is/are allowed.  
 6) Claim(s) 1-30 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
     1. Certified copies of the priority documents have been received.  
     2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
     3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | Paper No(s)/Mail Date. _____ .  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>4/17/2006 + 7/9/04</u> | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|   | 6) <input type="checkbox"/> Other: _____ .                                  |

## DETAILED ACTION

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-30 are rejected under 35 U.S.C. 102(e) as being anticipated by Okafuji et al., (US 20030085858).

As per claims 1,7,13,18 Okafuji shows a display driver (In fig.4 element 30) comprising: a plurality of display outputs each for outputting a drive voltage to a row or a column of a display; and a plurality of configuration bits each having a row/column setting, wherein each configuration bit is exclusively associated with one or more of said plurality of display outputs such that said row/column setting of said configuration bit is used to configure all of said associated one or more display outputs for driving either rows or columns of the display(in section 0043-0125).

As per claims 2,8 Okafuji shows some number of said display outputs associated with one configuration bit can be configured to drive rows of the display and another number of said display outputs associated with another configuration bit can be configured to drive columns of the display independent of each other (in section 0073).

As per claim 3, Okafuji teaches when at least one display output is set to drive a row of the display, said drive voltage output by said display output is set independent of

the total number of rows in the display (in section 0119-0126).

As per claims 4,5,10,11,16,17,26 Okafuji shows wherein the display driver is adapted to drive a bistable liquid crystal display (in section 0043).

As per claim 6, Okafuji shows each display output is uniquely associated with one of the configuration bits (in section 0073).

As per claim 9,12 Okafuji shows wherein, when at least one of said plurality of driver blocks is set to drive rows of the display, said drive voltage output by said display outputs of said at least one of said plurality of driver blocks is set independent of the total number of rows in the display (in section 0093-0096).

As per claims 14,15 Okafuji shows first and said second drive blocks can be set independently of each other to drive either rows or columns (in section 0088).

As per claim 19, Okafuji shows wherein one of said driver blocks has a certain number of display outputs, and further wherein another of said output blocks has a different number of display outputs (in section 0094).

As per claim 20,21,22,23,24,25 Okafuji shows configuration bits are implemented by using memory storage (in section 0079-0094).

As per claim 27, Okafuji shows a display driver comprising: a plurality of driver blocks, each driver block including a corresponding plurality of display outputs, each of said plurality of display outputs being effective for outputting a voltage to a row or a column of a display; and a plurality of configuration bits equal to the number of said plurality of driver blocks, wherein each configuration bit has a row/column setting and is associated with a corresponding driver block, and further wherein, each driver block is

set to drive either rows or columns according to said row/column setting, such that each of said corresponding plurality of display outputs of said driver block are all set for driving a row or a column, respectively, of the display(in section 0044-0094).

As per claim 28, Okafuji shows a display driver for driving a display, said display driver comprising: a plurality of driver blocks, each driver block including: a plurality of display outputs, each for outputting a voltage to a row or a column of a display; a configuration bit having a row/column setting; a cascade input; and a cascade output, wherein all of said plurality of display outputs of said driver block are set to drive either rows or columns of the display according to said configuration bit setting, wherein each of said plurality of driver blocks can be set independently to drive either rows or columns, and further wherein two or more of said plurality of driver blocks can be cascaded together for driving additional rows or columns of the display by connecting a cascade input of one of said two or more driver blocks to the cascade output of another of said two or more driver blocks(in section 0044-0096).

As per claim 29, Okafuji shows a first display driver can be cascaded with a second display driver by connecting the cascade input of one of a plurality of blocks of the second display driver with the cascade output of one of a plurality of blocks of the first display driver for driving additional rows or columns of the display (in fig.5).

As per claim 30, Okafuji shows a display driver comprising: a plurality of display outputs each for outputting a drive voltage to a row or a column of a display; a configuration bit having a row/column setting; a cascade input; and a cascade output, wherein the row/column setting of said configuration bit is used to configure one or more

display outputs for driving either a row or a column of the display, and further wherein a first display driver can be cascaded with a second display driver by connecting the cascade output of the first display driver with the cascade input of the second display driver for driving additional rows or columns of the display(in section 0044-0111).

***Allowable Subject Matter***

3. Claims 31-42 were allowed in previous office action.

***Response to Arguments***

4. Applicant's arguments with respect to claims 1-30 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nitin Patel whose telephone number is 571-272-7677. The examiner can normally be reached on 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin H. Shalwala can be reached on 571-272-7681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2629

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nitin Patel  
Examiner  
Art Unit 2629

